

## **AMENDMENTS TO THE CLAIMS**

This listing of claims replaces all prior versions and listings of claims in the application:

### **Listing of Claims**

1.-44. (Canceled)

45. (Currently Amended) An information rate control processor for controlling a communication rate for transmission of information between wireless terminals in a wireless telecommunication system having a core network and a plurality of access nodes in communication with the core network, the information rate control processor comprising:

a first sub-processor adapted to determine a plurality of maximum information transmission rates along ~~a path of communication~~ respective air interfaces established between ~~the core network and a plurality of~~ each wireless terminal and an access nodes node, wherein each ~~the plurality of~~ access nodes ~~are~~ node is adapted to control air interface resources and monitor the availability of the resources wherein the resources relate to an operation of a codec of a mobile terminal;

a second sub-processor adapted to select a lowest one of the plurality of maximum information transmission rates; and

a third sub-processor adapted to authorize or establish a communication rate no greater than the selected lowest rate.

46. (Currently Amended) The information rate control processor of claim 45, adapted to dynamically authorize or establish ~~the~~ a communication rate during a communication session based on the type of information being communicated by a first wireless mobile terminal to ~~the~~ a first access node.

47. (Currently Amended) The information rate control processor of claim 45, adapted to authorize or establish ~~the~~ a communication rate at the set up of a communication session between a wireless mobile terminal and the wireless telecommunication network.

48. (Currently Amended) The information rate control processor of claim 45, adapted to authorize or establish ~~the~~ a communication rate prior to the set up of a communication session between a wireless mobile terminal and the wireless telecommunication network.

49. (Currently Amended) The information rate control processor of claim 45, adapted to be located at an access node of ~~the~~ the wireless telecommunication system.

50. (Currently Amended) The information rate control processor of claim 45, adapted to be located at ~~the~~ the core network.

51. (Previously Presented) The information rate control processor of claim 50, wherein the information rate control processor operates in a service specific convergence sublayer of an AAL2 adaptation layer in the core network.

52. (Previously Presented) The information rate control processor of claim 50, adapted to operate in a real time transport protocol (RTP) transport layer in the core network.

53. (Previously Presented) The information rate control processor of claim 52, adapted to operate in an RTP transport layer in an asynchronous transfer mode (ATM) network.

54. (Currently Amended) A wireless communication system, comprising:  
a core network;

a plurality of access ~~nodes~~ nodes, each node in communication with the core ~~network~~ network, wherein the plurality of access nodes are adapted to control air interface resources and monitor the availability of the resources, the availability of resources comprising a current maximum air interface information transmission rate;

a plurality of endpoints comprising wireless mobile terminals, each operable to communicate with a respective access node over an air interface ~~wherein the resources relate to an operation of a codec of the wireless mobile terminals~~; and

an information rate control processor adapted to compare respective monitored maximum air interface information transmission rates and to control a communication rate for transmission of information in the wireless communication system among the plurality of access nodes and the endpoints based on the lowest maximum air interface information transmission rate, ~~wherein the rate of the operation of the codec can be altered based on a type of traffic transmitted via the air interface.~~

55. (Previously Presented) The wireless communication system of claim 54, wherein the core network comprises an asynchronous transfer mode (ATM) network.

56.-57. (Canceled)

58. (Previously Presented) The wireless communication system of claim 54, wherein the core network is an IP network.

59. (Canceled)

60. (Previously Presented) The wireless communication system of claim 54, further comprising at least two access nodes communicating between the endpoints, wherein the path of communication includes endpoint to endpoint communication.

61. (Canceled)

62. (Currently Amended) The wireless communication system of claim 60, wherein at least one air interface has a variable maximum information transmission rate.

63.-64. (Canceled)

65. (Previously Presented) The wireless communication system of claim 54, wherein the radio access network is one selected from the group consisting of a second generation cellular access network and a third generation cellular access network.

66. (Previously Presented) The wireless communication system of claim 65, wherein at least one of the access nodes is a radio network controller in a UMTS access network

67. (Previously Presented) The wireless communication system of claim 54, wherein at least one endpoint is located in a public land mobile network (PLMN).

68. (Canceled)

69. (Previously Presented) The wireless communication system of claim 67, wherein the core network includes a universal mobile telecommunication system (UMTS) mobile switching center (UMSC) for mapping messages into an lu framing protocol for transport in the UMTS access network.

70. (Previously Presented) The wireless communication system of claim 54, wherein at least one of the access nodes is located in a fixed access network.

71. (Previously Presented) The wireless communication system of claim 70, wherein the fixed access network is one selected from the group of a public switched telephone network (PSTN), an integrated services digital network (ISDN), and an PSTN/ISDN access network.

72. -73. (Canceled)

74. (Currently Amended) An information rate control function means for controlling a communication rate for transmission of information between mobile terminals ~~in~~ via a wireless telecommunication system comprising:

a determining means adapted to determine a ~~plurality of~~ maximum information transmission rates along ~~a path of communication established~~ each air interface between a plurality of an access nodes node and a mobile terminal, wherein the ~~plurality of~~ access nodes are adapted to control air interface resources and monitor the availability of the resources wherein the resources relate to an operation of a codec of a mobile terminal;

a selection means adapted to select a lowest one of ~~the plurality of~~ the determined maximum information transmission rates; and

an authorizing or establishment means adapted to authorize or establish a communication rate no greater than the selected lowest rate, wherein the communication rate of the codec can be altered based on a type of traffic transmitted via the air interfaces.

75. (Previously Presented) The information rate control function means of claim 74, adapted to communicate the plurality of maximum information transmission rates across a core network as messages within 1.366.2 Type 3 cells of an ATM AAL2 protocol.

76. (Previously Presented) The information rate control function means of claim 74, adapted to communicate the plurality of maximum information transmission rates across a core network as messages within RTP packets of an IP protocol.

77. (Currently Amended) A wireless telecommunications system, comprising:  
at least one access network connected to a core network;  
at least a first and a second endpoint, comprising wireless mobile terminals, in communication with each other via the at least one access network across the core network;

at least a first and a second telecommunication node adapted to set information transmission to and from the first and second endpoint; and

at least a first and a second air interface, wherein the first and second interfaces are adapted to control air interface resources and monitor the availability of the resources; the at least first and second endpoints communicating with the at least one access network across the first and second interfaces, at least one of the interfaces having a variable maximum information transmission rate, wherein the resources relate to an operation of a codec of each of the wireless mobile terminals;

wherein the first and second telecommunications nodes respectively are adapted to signal to a remote node the maximum information transmission rate supportable by the first and the second air interfaces, the remote node adapted to compare the maximum information transmission rates that can be supported by the first and second interfaces, wherein the information transmission rates of the codecs can be altered based on the maximum information transmission rate comparison ~~a type of traffic transmitted via the first and the second interfaces.~~

78. (Canceled)

79. (Currently Amended) A wireless telecommunications system comprising:

- a core network;
- a plurality of access networks connected to the core network,
- a first and second endpoint comprising wireless mobile terminals, the first and second endpoints communicating with each other via the access networks across the core network;
- a first and second telecommunications node, information transmission to and from the first and second endpoints being respectively set by the first and second telecommunications nodes; and
- a first and second air interface having respective maximum transmission rates, wherein the first and second interfaces are adapted to control air interface resources and monitor the availability of the resources, the first and second endpoints communicating with one of the access networks respectively across the first and second interfaces, at least one of the interfaces having a variable maximum information transmission rate, wherein the resources relate to an operation of a codec of each of the endpoints, wherein the information transmission rates of the codecs can be altered based on an a maximum transmission rate comparison comparing the maximum information transmission rates for each air interface and on a type of traffic transmitted via the first and the second interfaces.

80. (Canceled)

81. (Currently Amended) A method for controlling a communication rate for transmission of information between mobile terminals in a wireless telecommunication system having a core network and a plurality of access nodes in communication with the core network, comprising the steps of:

- determining a plurality of maximum information transmission rates along ~~a path of communication~~ each air interface established between ~~a plurality of an access nodes node~~ and a respective mobile terminals terminal, each mobile terminal including a codec;

selecting ~~[[a]]~~ the lowest one of the plurality of maximum information transmission rates, ~~wherein the information transmission rates of the codecs can be altered based on a type of traffic transmitted via the codecs;~~ and

authorizing ~~or establishing~~ a communication rate no greater than the selected lowest rate.

82. (Currently Amended) The method of claim 81, wherein the communication rate is dynamically authorized ~~or established~~ during a communication session between an access node and a mobile terminal.

83. (Currently Amended) The method of claim 81, wherein the communication rate is authorized ~~or established~~ at the set up of the communication session.

84. (Currently Amended) The method of claim 81, wherein the communication rate is authorized ~~or established~~ prior to the set up of the communication session.

85. (Previously Presented) The method of claim 81, further including the step of communicating the plurality of maximum information transmission rates across the core network as messages within 1.366.2 Type 3 cells of an ATM AAL2 protocol.

86. (Previously Presented) The method of claim 81, further including the step of communicating the plurality of maximum information transmission rates across the core network as messages within RTP packets of an IP protocol.

87. (Currently Amended) A method for controlling the rate of information transmission between first and second endpoints, comprising wireless mobile terminals, ~~which~~ that communicate with each other via access networks separated by a core network, information transmission to and from the first and second endpoints being respectively set by first and second ~~telecommunications~~ telecommunication nodes, wherein the first and second telecommunication nodes are adapted to control air interface resources and monitor the availability of the resources, the first and second



endpoints wirelessly communicating with one of the access networks respectively across first and second air interfaces, at least one of the air interfaces having a variable maximum information transmission rate, the method including the steps of:

signaling by the first and second telecommunications nodes respectively to a remote node the maximum information transmission rate supportable by the first and second air interfaces, wherein the resources relate to an operation of a codec of each of the endpoints;

comparing the maximum information transmission rates supportable by the first and second air interfaces; and

setting the information transmission rate of each endpoint to not exceed that of the lower of the maximum information air interface transmission rates, ~~wherein the information transmission rates of the codecs can be altered based on a type of traffic transmitted via the first and the second air interfaces.~~

88. (Previously Presented) The method of claim 87, wherein the remote node signaled by each of the first and second telecommunications nodes is the other of the first and second telecommunications nodes.

89. (Previously Presented) The method of claim 87, wherein the comparing of the maximum information transmission rates supportable by the first and second air interfaces is performed in each of the first and second telecommunications nodes.

90. (Previously Presented) The method of claim 87, wherein the setting of the information transmission rate of each endpoint to not exceed that of the lower of the maximum information transmission rates further comprises setting the rate of operation of a codec to the lower of the maximum information transmission rates.